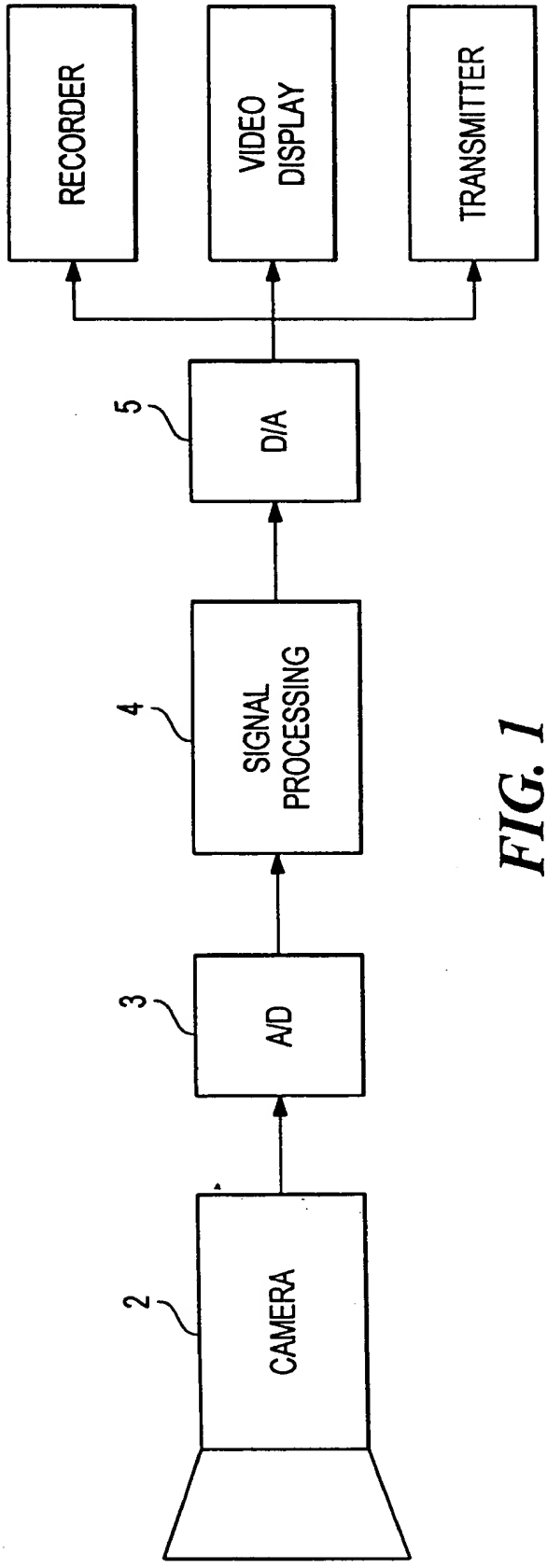

RECORDER
VIDEO DISPLAY
TRANSMITTER
5
D/A
4
SIGNAL PROCESSING
3
A/D
2
CAMERA

FIG. 1

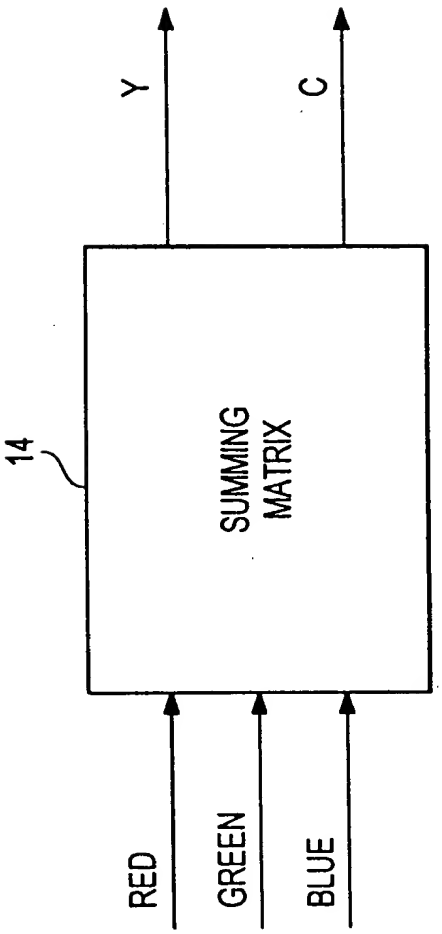

Y
C
14
SUMMING MATRIX
RED
GREEN
BLUE

FIG. 2

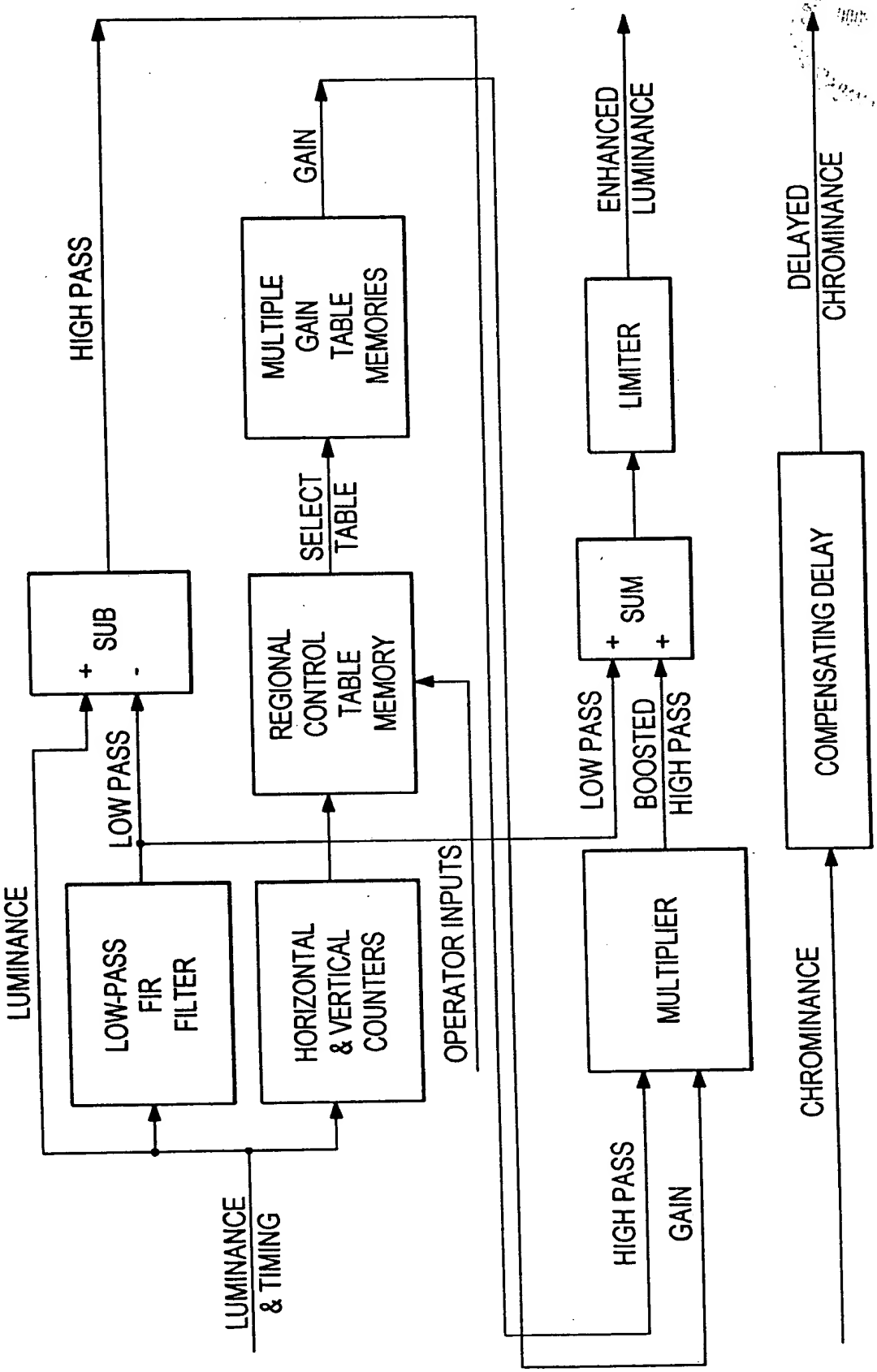
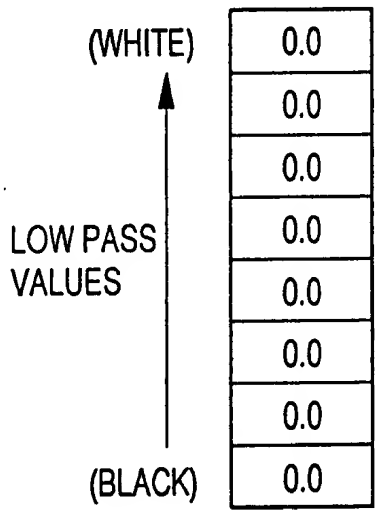

LUMINANCE & TIMING
LUMINANCE
LOW-PASS FIR FILTER
HORIZONTAL & VERTICAL COUNTERS
LOW PASS
+ SUB -
HIGH PASS
REGIONAL CONTROL TABLE MEMORY
SELECT TABLE
MULTIPLE GAIN TABLE MEMORIES
GAIN
OPERATOR INPUTS
HIGH PASS
GAIN
MULTIPLIER
LOW PASS
BOOSTED HIGH PASS
+ SUM +
LIMITER
ENHANCED LUMINANCE
CHROMINANCE
COMPENSATING DELAY
DELAYED CHROMINANCE

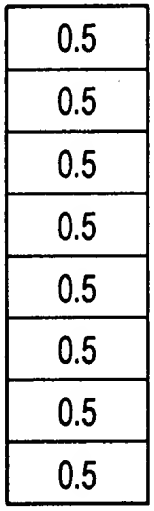
FIG. 3

GAIN TABLE MEMORY EXAMPLES



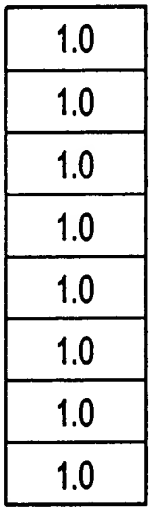
GAIN TABLE 0
ALL VALUES = 0

FIG. 4A



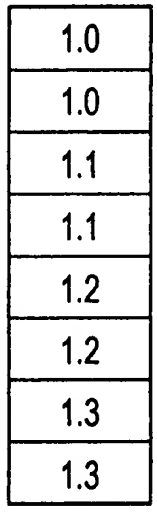
GAIN TABLE 1
ALL VALUES = 0.5

FIG. 4B



GAIN TABLE 2
ALL VALUES = 1.0

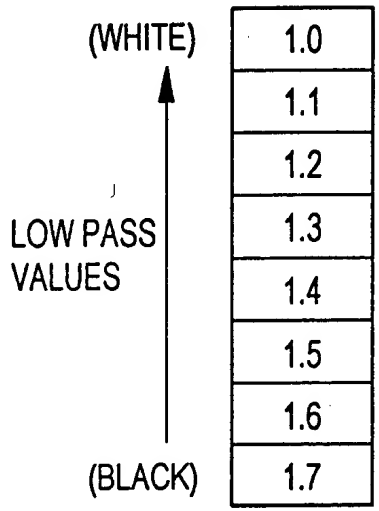
FIG. 4C



GAIN TABLE 3
ENHANCEMENT
LEVEL 1

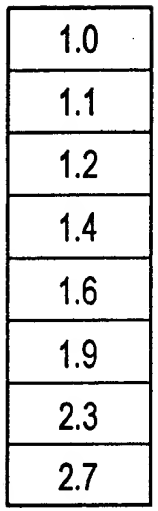
FIG. 4D

GAIN TABLE MEMORY EXAMPLES



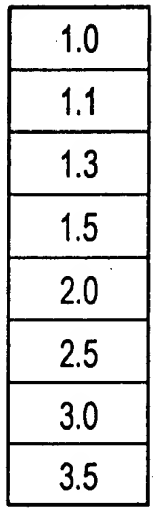
GAIN TABLE 4
ENHANCEMENT
LEVEL 2

FIG. 4E



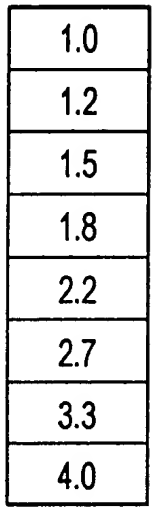
GAIN TABLE 5
ENHANCEMENT
LEVEL 3

FIG. 4F



GAIN TABLE 5
ENHANCEMENT
LEVEL 4

FIG. 4G



GAIN TABLE 7
ENHANCEMENT
LEVEL 5

FIG. 4H

REGIONAL CONTROL TABLE
MEMORY EXAMPLE 1

0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	7	7	7	0	0	0
0	0	0	7	7	7	0	0	0
0	0	0	7	7	7	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

VERT

SMALL ENHANCED
REGION SURROUNDED
BY GAIN = 0 AREA

HORIZ

FIG. 5A

REGIONAL CONTROL TABLE
MEMORY EXAMPLE 2

0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	7	7	7	7	7	0	0
0	0	7	7	7	7	7	0	0
0	0	7	7	7	7	7	0	0
0	0	7	7	7	7	7	0	0
0	0	7	7	7	7	7	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

VERT

LARGER ENHANCED
REGION SURROUNDED
BY GAIN = 0 AREA

HORIZ

FIG. 5B

REGIONAL CONTROL TABLE
MEMORY EXAMPLE 3

0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	1	1	0
0	1	2	2	2	2	2	1	0
0	1	2	7	7	7	2	1	0
0	1	2	7	7	7	2	1	0
0	1	2	7	7	7	2	1	0
0	1	2	2	2	2	2	1	0
0	1	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0

VERT

SMALL ENHANCED
REGION SURROUNDED BY
GRADUATED SOFTENING REGIONS

HORIZ

FIG. 5C

REGIONAL CONTROL TABLE
MEMORY EXAMPLE 4

7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2
7	7	7	7	7	2	2	2	2

VERT

SPLIT SCREEN
LEFT SIDE ENHANCED
RIGHT SIDE GAIN = 1

HORIZ

FIG. 5D

REGIONAL CONTROL TABLE
MEMORY EXAMPLE 5

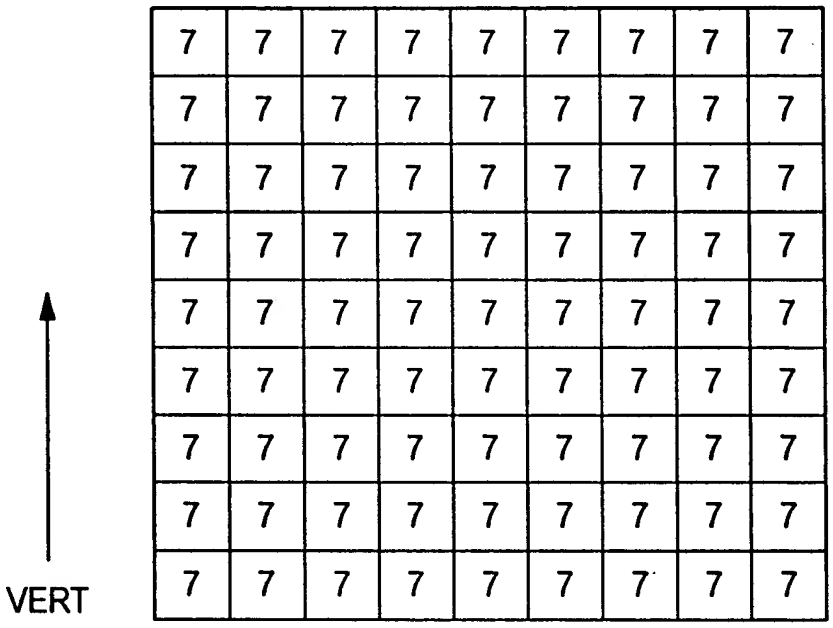


FIG. 5E